

A Good Reason to Smile!
No evidence of tooth staining in kids treated with doxycycline

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The Centers for Disease Control and Prevention (CDC) and the American Academy of Pediatrics (AAP) recommend doxycycline as first line treatment for Rocky Mountain spotted fever (RMSF). Studies have shown that the use of other broad-spectrum antibiotics is not effective. Additionally, sulfas and fluoroquinolones may cause more severe disease.

Two recent surveys have shown that health care providers may choose not to use or delay use of doxycycline in children under 8 years when they suspect RMSF. This is likely to lead to increased morbidity and mortality in children from RMSF.

Past studies have not shown staining of permanent adult teeth following doxycycline administration in children. However, these studies looked at very small numbers of children.

Due to the threat of RMSF in eastern Arizona since 2003, the Whiteriver IHS hospital has been treating all children who present with 2 or more days of fever with doxycycline. The result is more than 500 children currently between the ages of 8 and 16 years having taken at least one course of doxycycline prior to the age of 8 years.

Our study was designed to answer the question “Does doxycycline, when used at the recommended dose and duration for Rocky Mountain spotted fever, cause staining of adult, permanent teeth when used in children under the age of 8 years?”

Children currently aged 8-16 years were chosen for the study, both those who had been prescribed doxycycline and those who had not. Three hundred thirty-five children were examined and 76 of those children took doxycycline before the age of 8 years. The dental assessment included a visual examination of the top, eight front teeth and a color measurement with the VITA Easyshade Compact instrument. Medication history was obtained through medical record abstraction.

No signs of tetracycline-like staining were found. Preliminary analysis has found that those who were exposed to doxycycline prior to the age of 8 years were no more likely to have dark teeth than those not exposed to doxycycline.

Our results should reassure health care providers that tooth staining is not a concern when prescribing doxycycline for children when RMSF is suspected.